

EXHIBIT 6

Deposition	Plaintiffs' Designation	Defendants' Corresponding Counter Designation	Reason that Defendants' Counter Designation Must be Considered According to Fed.R.Civ.P 32(a)(4)
Steve Fuller, June 21, 2005	67:8-18, 67:21-68:22, 68:24-25	50:22-51:11	Both Plaintiffs' and Defendants' designations deal with questions asked of Fuller regarding what he thinks intelligent design is
	58:14-15, 59:6-60:7, 167:8-169:11	56:11-57:23	Both Defendants' and Plaintiffs' designations address different intelligent design theories, such as irreducible complexity and Dembski's explanatory filter
	67:8-68:25, 153:5-6, 8-10, 21-22, 156:2-157:2	90:13-92:4	Both Defendants' and Plaintiffs' designations deal with questions posed to Fuller regarding similarities and differences between creationism and intelligent design
	67:8-68:25	146:6-146:20	Both Defendants' and Plaintiffs' designations point to questions asked of Fuller about whether intelligent design theory is a form of creationism
	140:17-141:10, 154:7-11	147:8-19	Defendants' designation talks about intelligent design in terms of conceptual space (the way that science moves forward) and whether is it religious and/or religiously inspired, and Plaintiffs' related designations refer to the future and openness of science and the religious motivation of intelligent design theorists

	156:2-157:2	157:3-14	Defendants' designation is the immediate continuation of Plaintiffs', both in location and subject matter (Fuller's perspective on scientific concerns about arguments made by Dr. Meyers)
	167:8-169:10, 170:1-9	170:10-171:2	Defendants' designation is the immediate continuation of Plaintiffs', both in location and subject matter (logical scientific conclusions and elimination of hypotheses)
	167:8-169:11, 170:1-9	171:24-173:15	Defendants' designation follows Plaintiffs' and deals with the same question that Plaintiffs' designation begins with—in both instances Fuller is being asked about the “best explanation” for intelligent design
	58:14-15, 59:6-60:7, 167:8-169:11	186:16-188:9	Defendants' designation addresses the subject of the explanatory framework of intelligent design, including the explanatory filter and irreducible complexity, a subject raised by Plaintiffs in their designations
	140:14-141:10, 141:12-142:10	216:15-217:7	In Plaintiffs' designation, Fuller is asked the question of why intelligent design should be taught to ninth graders, and Defendants' designation addresses that precise question.

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA
TAMMY KITZMILLER; BRYAN AND
CHRISTY REHM; DEBORAH FENIMORE
AND JOEL LIEB; STEVEN STOUGH;
BETH EVELAND; CYNTHIA SNEATH;
JULIE SMITH; AND ARALENE ("BARRIE")
D. AND FREDERICK B. CALLAHAN,

Plaintiffs,

Civil Action No.:

v.

04-CV-2688 (M.D. Pa.)

DOVER AREA SCHOOL DISTRICT;
DOVER AREA SCHOOL DISTRICT BOARD
OF DIRECTORS,

Defendants.

DEPONENT: STEVE WILLIAM FULLER, PH.D.
DATE: Tuesday, June 21, 2005
TIME: 9:35 a.m.
LOCATION: 24 Frank Lloyd Wright Drive
Ann Arbor, Michigan

APPEARANCES:

For the Plaintiffs:

MR. ERIC ROTHSCHILD
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For the Defendants:

MR. PATRICK T. GILLEN (P47456)
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Ann Arbor, Michigan 48105
(734) 827-2001

1 Q Have you taught any classes in education?
 2 A Yes.
 3 Q What have you taught?
 4 A Well, I've taught a cross-listed class at UCLA between
 5 library and information science and education.
 6 Q And what was the subject matter of that class?
 7 A It was on my own -- my own work on social epistemology which
 8 has some credibility in these areas.
 9 Q Do you consider yourself an expert in Intelligent Design?
 10 A An expert in Intelligent Design. No.
 11 Q Okay.
 12 A I'm an expert on the nature of science.
 13 Q Gotcha. Okay. Do you consider -- do you consider
 14 yourself -- you said that Intelligent Design is science. I
 15 think -- I think we can agree, you're basically saying it's
 16 science but not as far along as some of the other natural
 17 sciences?
 18 A Yes.
 19 Q Okay. Do you consider yourself an expert on the scientific
 20 content of Intelligent Design?
 21 A I'm not sure what you mean by that.
 22 Q Well, let me ask you, let me ask you, what is Intelligent
 23 Design?
 24 A What is Intelligent Design? Well, it's an attempt to explain
 25 actually a vast array of phenomena, not just restricted to

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1 the origins of life, in terms of some kind of design that was
 2 put there deliberately. Now, the scope of the theory -- the
 3 scope of this science is potentially quite large. In that
 4 respect, it's very much like information science, that in a
 5 way, doesn't have to be restricted to a single domain. So
 6 it's just not about life. It could be about anything that
 7 displays this design pattern because machines, obviously,
 8 have Intelligent Design, right, and they're not forms of
 9 life. So it is -- in a way, it's kind of almost like a
 10 second order science, like information theory attempts to be.
 11 I guess that would be how I would pitch it.
 12 Q You used -- you know, obviously, the word design is in the
 13 term Intelligent Design.
 14 A Yeah, yeah.
 15 Q What do you mean by design?
 16 A Well, it's very unlikely that the order that is produced
 17 would have come about through -- through chance, right, that
 18 there isn't some sense, some plan there that the order was
 19 meant to be there. I mean, the model for it in an artifact
 20 or a machine. Something, obviously, a human has designed.
 21 I mean, that's -- I mean, in that respect, you know, Paley sets
 22 a kind of benchmark for what the image of the -- of what the
 23 science is about. And that's why -- that's the -- sort of
 24 the natural way to understand this. And then with all the
 25 stuff that's going on now with Intelligent Design

1 understanding the nature of life, that's sort of an extension
 2 of the idea, because I think we have no problem with
 3 Intelligent Design with regard to artifacts.
 4 Q And why do you say that?
 5 A Because humans are the intelligents who are designing the
 6 things. I mean, we know where it comes from. We actually
 7 know the causal process in terms of how these things are
 8 produced.
 9 Q And how do you understand we come to that knowledge with
 10 artifacts?
 11 A How do we come to that knowledge? Well, largely because we
 12 could do it ourselves. Right. We can actually produce
 13 these -- we can say -- I can say, look, I'm going to design a
 14 car. I'm doing it, it's done. Here's the car. And you can
 15 sort of lay out the steps by which it happens. You can talk
 16 about the general blueprint, how the blueprint's supplied
 17 materially to make the thing run and then it works. And so
 18 you have a complete sense of that causal process there. And
 19 so that's the kind of paradigm case I would say of
 20 Intelligent Design.
 21 Q And am I correct in understanding your testimony from a
 22 couple minutes ago that that kind of design inference, so to
 23 speak, is the model for the design inference being used for
 24 biological life?
 25 A Yeah, I would say so. I would say that's ultimately what's

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1 being aimed at. Yes.
 2 Q Here's what I don't understand. And maybe you can help clear
 3 this up for me. You explained how we understand design of
 4 human artifacts from the -- and you said, you know, we can
 5 understand it because we can do it, right? How does that
 6 provide a model for design of biological life?
 7 A Well, I think the best way to think about this is in fact
 8 with what -- imagine computer simulations which, you know,
 9 are increasingly in the biological sciences when we're trying
 10 to project backward into how life began, where, you know, we
 11 have recourse -- we of course have recourse to fossils to a
 12 certain extent. We can get some sense of what life was like
 13 in the beginning that way. And we can do some DNA testing on
 14 that. But increasingly we have to rely on computer
 15 simulations. And computer simulations are design functions,
 16 right, where you're programming a system to behave in a
 17 certain way, and then you see what the outcomes are. And you
 18 say, well, okay, let's say that I imagine that the world was
 19 designed with these three or four parameters that interact in
 20 a certain way according to a computer program I can
 21 specialize -- specify. Well, that then produced the world as
 22 we know it. Okay. If it does, right, that's a good argument
 23 for design, it seems to me. If not, you know, back to the
 24 drawing board. But the point is we're already doing stuff in
 25 science where we're actually engaged in design like

1 activities.
2 Okay. So I don't think it's so far fetched in
3 principle, especially in the period in which we're living,
4 where we're doing more and more of our science on computer
5 programs which requires that the scientist actually design
6 the situation in which the phenomenon is going to manifest
7 itself. I mean, so I -- I don't see -- I don't see quite the
8 problem in principle here.
9 Q Well, why would the fact that humans can design a model lead
10 us to any conclusions about what a non-human, non-natural
11 actor can do in terms of creating some form of biological
12 life?
13 A Well, just stated that way, sure. You're absolutely right.
14 But that's not -- that's not the whole story, right? In
15 fact, you know, this is where one -- I mean, the point is
16 that even people who don't consider themselves proponents of
17 Intelligent Design are in fact, you know, playing around with
18 models that, in a sense, put them in the position of
19 potential designers of universes. Okay. So in a sense,
20 science is moving in a design oriented direction already.
21 It's just the people doing it who, let's say, do complexity
22 theory and stuff like that don't like to call it Intelligent
23 Design. But in a sense, they're adopting the standpoint, you
24 know, that would seem to me ultimately Intelligent Design is
25 trying to work itself back to. That's why so many of these

1 A Yeah. I mean Dembski and Behe. That is to say, not the high
2 school textbooks.
3 Q Okay. So let's just be clear what you mean. And let me ask
4 this in a couple of -- a couple questions about this. First
5 of all, you said you're not -- you don't hold yourself out as
6 an expert in the content, the scientific content of
7 Intelligent Design, is that right?
8 A We haven't gotten back to what you mean by that yet. Can
9 you -- you just threw the question back at me. So what do
10 you mean by scientific content?
11 Q Well, okay, fair enough. What do you understand to be the
12 core propositions of Intelligent Design as it applies to
13 living things, biological life?
14 A What do I understand them to be?
15 Q Yes.
16 A Well, it depends which -- these guys don't all hold the same
17 views exactly. Okay. That's the first point, right?
18 Intelligent Design is, in a sense, kind of a covering term
19 for a lot of overlapping theories, you might say. I mean,
20 there is this business of -- I mean, that Behe emphasizes of
21 the irreducible complexity of cellular life. But then
22 there's also the business with Dembski and the idea of design
23 as a kind of explanatory filter that is not as probable as
24 just mindless natural regularity, but not as improbable as
25 chance. So these are kind of general notions that these guys

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1 arguments are arguments that, in a sense, are meant to be
2 conducted on computers under mathematical terms. It's not --
3 it's not -- the old -- it is true that with Paley and a lot
4 of these old guys, there is some kind of analogy which is
5 parasitic on the idea that, you know, human beings are made
6 in the image and likeness of God. So if humans can do it,
7 then God can do it kind of in a bigger way. I understand
8 that, and that's the theological basis for the design
9 argument. But it seems to me now with science, we've got
10 sort of -- we're now in a situation where the way we actually
11 do science is one where we're in the design position, and
12 we're kind of doing the sorts of things that let's say a
13 creator would do if they were simulating a universe. And so
14 I don't see the -- you know, so it's sort of a different
15 basis for making the inference. Now, whether you're going
16 to -- you know, I mean, I would suppose the tough question is
17 whether there would ever be any kind of empirical way of
18 resolving whether a simulated universe designed by a human
19 being, to say this is how the world happened, could ever be
20 proven empirically. And I don't know if that could happen.
21 But then again, evolution's stuck with that problem, too.
22 Everybody's kind of stuck with that problem.
23 Q One of the things you say on the first page of your report is
24 my expertise experts to a consideration of ID in its most
25 developed forms.

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1 are working with as providing constraints on the possibility
2 for life. Okay. And they're coming at it from somewhat
3 different directions. So, I mean, that's what -- at least
4 that's what I understand to be distinctive about the
5 position, right, in the sense it makes it different from what
6 evolutionists are saying.
7 Q Okay. So if -- the answer to the question, you know, what is
8 ID comprised of from a scientific standpoint is Behe's notion
9 of irreducible complexity?
10 A Yeah. And Dembski's explanatory filter. And those are the
11 basic explanatory principles, the fundamental ones that are
12 being developed now, it seems to me.
13 Q Other than those two explanatory principles, are you aware of
14 any other explanatory principles that are part of the
15 Intelligent Design as a scientific concept?
16 A Well, I would say at this level of generality, those are the
17 main ones. I mean, there's -- Meyer has this sort of an
18 information specification criterion as well. But, you know,
19 if you were to look at any given science, you'd only come up
20 with about two or three fundamental principles for any of
21 them any way. So the fact that there aren't a whole lot of
22 them, and they all seem to overlap or have something in
23 common, that itself is not prejudicial, it seems to me.
24 Q I'm not characterizing. I just want to make sure I
25 understand what you understand Intelligent Design to be.

1 A Yeah, yeah, yeah.
2 Q Okay. So basically, the two big principles are irreducible
3 complexity and the explanatory filter?
4 A Uh-huh.
5 Q That's a yes?
6 A Yes, yes.
7 Q Okay. I don't mean to be scolding you. I just want to make
8 sure the record is clear. Do you consider yourself an expert
9 on the proposition of irreducible complexity?
10 A An expert on the proposition? Not an expert on the
11 proposition, no. No, I don't do research in that area. No.
12 I mean, you know, what I know is what I read of it. So I'm
13 not -- I'm not adept in the area.
14 Q Okay. Do you consider yourself an expert in Dembski's work
15 including the explanatory filter?
16 A Not -- not -- I mean, maybe I'm not getting what you mean by
17 expert. But it seems to me that the answer would be no.
18 Unless you mean expert in a looser sense.
19 Q Well, I mean, I think you've acknowledged, for example,
20 you're not an expert in paleontology?
21 A Uh-huh, yes.
22 Q Same as me?
23 A Yes.
24 Q And I'm trying to understand, you know, paleontology, you
25 would agree, is a discipline that at least in part is

1 orders being maintained that aren't so -- that aren't so
2 necessary that it doesn't require any intelligence at all,
3 but also not so random that you can't see evidence of
4 intelligence either. So it's meant to be kind of a middle
5 ground. And it's meant to be specified mathematically. And
6 then it's been sort of discussed in those terms, whether one
7 can do that.
8 Q And do you have an understanding of whether one can do that?
9 A Well, it seems to me that he hasn't done it yet. But he's
10 kind of laid out a very interesting project in this respect
11 in that, first of all, he translates the metaphysical notions
12 into mathematically specifiable ones, and he enables then
13 people who are adept in these areas to be able to contest
14 whether certain cases that might be counted as design would
15 fall into the way he's defined it because of the
16 probabilities that they would be maintained or not. And so
17 when he gets into these arguments with philosophers, you
18 know, about probability theory, right, sometimes they say
19 he's being too strict, sometimes they say he's being too
20 loose as to what to count as design. Because remember, we're
21 talking about a theory of design that just doesn't cover the
22 origins of life, but covers everything that we might think of
23 as being design, including artifacts. And so in a sense,
24 it's fair game in terms of the kinds of examples that might
25 be considered relevant for falling under this filter.

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1 considered in the area of evolution?
2 A Yes.
3 Q Okay. So now I'm looking at Intelligent Design, and you've
4 identified a couple of sort of underlining explanatory
5 principles and I'm trying to understand sort of parallel to
6 what you said about paleontology, do you consider yourself an
7 expert in irreducible complexity?
8 A Right, okay. I'm not an expert in that area. That's
9 correct.
10 Q Okay. And the same with Dembski's work?
11 A That's correct.
12 Q Okay. Do you have some familiarity or understanding of what
13 the explanatory filter is?
14 A Yes.
15 Q And what is that?
16 A Well, the explanatory filter is meant to provide a kind of
17 probabilistic space. I mean, so the key thing -- first move
18 that Dembski makes is to translate issues having to do with
19 chance and design and regularity in nature into probability
20 theory. So he tries to move it out of the metaphysical space
21 into a mathematical space. And then the explanatory filter
22 is going to be this -- this range of possibilities between
23 regularity, physical regularity on the one hand, and chance
24 on the other one which design can operate. So it has to be
25 kind of within a range of probability of certain kinds of

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1 And so he gets a lot of counterexamples that seem to
2 sort of, in a way, not quite fit what he's trying to do. And
3 he's had to -- he has to kind of respond to that. So I
4 wouldn't say he's -- he has succeeded, but he has kind of --
5 he hasn't succeeded in the sense of having nailed down the
6 filter. But what he has succeeded in doing, I think, is
7 laying out a research project as to say to identify the
8 parameters of this filter, which in principle, should be able
9 to do. And the way in which people are responding to him
10 critically suggests that it is something that one can work
11 with and do something with.
12 Q Well, I think I'm understanding you to say he hasn't actually
13 applied this explanatory filter to an aspect of biological
14 life and shown that it was intelligently designed; is that
15 correct?
16 MR. GILLEN: Objection.
17 THE WITNESS: But the theory is not that far advanced
18 BY MR. ROTHSCCHILD, CONTINUING:
19 Q Okay. So he has not done that yet?
20 MR. GILLEN: Objection to the form. You can go ahead.
21 THE WITNESS: Not that -- no, but I don't think he's
22 intending to do that.
23 BY MR. ROTHSCCHILD, CONTINUING:
24 Q Okay. And you're not aware of anybody else taking his
25 explanatory filter and applying it to an aspect of biological

1 satisfied by virtue of the counterexamples that can be
 2 raised. It doesn't mean that it can't explain anything. It
 3 means it can't explain everything. Those are two different
 4 states. And a lot depends on how he develops from there.
 5 Q Other than what we've discussed about your reading of
 6 portions of Dr. Behe's work and portions of Dr. Dembski's
 7 work, what else have you done to educate yourself about the
 8 subject of Intelligent Design?
 9 A Well, I have looked into the -- the history -- well, I mean,
 10 first of all, a general -- a general understanding of the
 11 history of biology, and especially the way in which Darwinism
 12 has been related to these larger design issues historically,
 13 and also the way in which fundamentalist religion and so
 14 forth have played a role. I mean, I've sort of done a lot of
 15 backfilling, you might say, to get a sense of where this
 16 stuff comes from. And also to look at some of the
 17 non-evolutionary forms of biology that seem -- from the
 18 pre-Darwinian period that seemed to have some resonance with
 19 some of these arguments that we're seeing today. I mean, in
 20 a way, what it's caused me to do is to look at a lot of stuff
 21 that I've looked at in the past in a somewhat different
 22 light, because what I see Intelligent Design as doing is more
 23 so than the earlier creation, is pulling together lots of
 24 strands from the history of science in a way that's been
 25 marginalized by Darwinism, like the design argument, for

1 was referring to this -- this kind of form that was the
 2 previous form that was dominant in the trials that were over
 3 evolution and creation in this country in the '80's, right,
 4 which was the kind of biblical, literalist six day stuff,
 5 whereas now, we've got Intelligent Design as really being on
 6 the dock, rather than this -- at least as far as I
 7 understand. I don't -- I don't -- maybe you're going to tell
 8 me the six day stuff is being discussed. But as far as I
 9 understand, we're talking about a different thing now. But
 10 of course, there's still earlier forms of -- there are other
 11 forms of creationism that are actually scientifically more
 12 sophisticated, kind of wedded to the Paley style arguments of
 13 the past, but not necessarily committed to a sort of six day
 14 biblical, literalist view.
 15 Q Okay. So --
 16 A So creationism is kind of a big thing, right.
 17 Q Right. And Intelligent Design is one --
 18 A Part of that, yeah. But --
 19 Q But don't --
 20 A Some of --
 21 Q I'm sorry, you're -- Intelligent Design is creationism; just
 22 not six day creationism?
 23 MR. GILLEN: I object to the form.
 24 THE WITNESS: It is a kind of creationism. It is a kind
 25 of creationism.

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1 example. Sort of retaking that seriously. So it causes me
 2 to sort of re-examine the history, kind of look at it
 3 somewhat differently. It's also caused me to wonder about
 4 the extent to which Darwinism has been a scientific
 5 revolution as well. I mean, so that it's a sense in which
 6 it's been that kind -- that kind of thing more generally.
 7 Q Couple things I want to follow up on that you just said.
 8 First of all, you referred to ID or Intelligent Design in
 9 comparison to earlier forms of creationism. What did you
 10 mean by that?
 11 A Well, I mean the kinds of things that were being discussed in
 12 the Arkansas trial back in '82, where one was still talking
 13 about, you know, six day creation and sort of biblical
 14 literalist basis.
 15 Q You've used this phrase ID in conjunction with earlier forms
 16 of creationism, not just in your previous answer, but also in
 17 your report. And I infer from that what you mean is
 18 Intelligent Design is a modern view of creationism?
 19 MR. GILLEN: Objection to the form.
 20 BY MR. ROTHSCHILD, CONTINUING:
 21 Q Is that correct?
 22 A Well, again, yes, in a sense. But, I mean, not all
 23 creationism has been six day creationism. So keep that in
 24 mind, that when I was answering your previous question, I was
 25 referring to -- when I said earlier forms of creationism, I

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1 BY MR. ROTHSCHILD, CONTINUING:
 2 Q Okay, okay. And when you use the word creationism, what do
 3 you mean?
 4 A Well, I mean that -- the idea that there is a kind of a
 5 unified order to nature that is evidence of Intelligent
 6 Design. I mean, what we now call Intelligent Design, which
 7 used to be called the creator, because the creator was always
 8 the person who had the Intelligent Design. So there is this
 9 historical lineage. I don't think that's controversial.
 10 Q Okay. When did you first start -- I mean, is it fair to say
 11 that you have studied Intelligent Design?
 12 A Yes.
 13 Q Okay. When did you first start studying Intelligent Design?
 14 A Well, I don't know -- you know, it's funny. I don't know
 15 whether it was being called that then. But certainly -- see,
 16 I went to the University of Pittsburgh which is where Larry
 17 Laudan used to teach. And as you may know, Larry Laudan
 18 wrote a couple of articles that were very scathing of Michael
 19 Ruse's participation on the evolution side of the Arkansas
 20 case about saying how this was misusing the expertise and
 21 philosophy of science. And he was drawing this distinction
 22 between the difference between a theory being true and false
 23 versus a theory being scientific. And he was making the
 24 argument that in a sense, you might want to say creationism
 25 is scientifically false, which is not -- you know, which is

1 A Well, creation science was originally an attempt to sort
2 of -- I mean, I think in light of the Arkansas case, right,
3 it was seen as a way of trying to bring in these biblical
4 principles into the science classroom by making it look as
5 though there were scientific grounds for holding what turned
6 out to be biblical beliefs. And so sometimes fossils would
7 be appealed to, sometimes they would be dismissed out of
8 hand, depending on what kind of suited the purpose of the
9 textbook writer. But there was no real clear evidence of any
10 kind of internal development taking place. It was rather, it
11 seemed like kind of camouflage strategy. I mean, at least
12 that seems to be the final verdict on this.

13 Q And do you -- to you, Intelligent Design is different than
14 creation science?

15 A Yes, I think so. I think -- not only do I think it's
16 different, I think also its critics treat it differently.
17 That is to say, including the critics who don't want to see
18 it taught.

19 Q And in what respects is Intelligent Design different than
20 creation science?

21 A Well, because you, first of all, Intelligent Design actually
22 more self-consciously draws on these wider traditions of
23 Western thought from natural theology and onward that have
24 been marginalized by Darwin which try to deal with larger
25 questions about the nature of life, and which did have some

1 see, so all of that I think is indicating that Intelligent
2 Design is really scientific, and isn't very much reliant
3 anymore in whatever historical connections it's had with
4 religion.
5 Q If you took Dembski's work away, and you took Behe's work
6 away, and I understand you're not going to do that. But
7 would there then be any distinction between Intelligent
8 Design and creationism?

9 A Well, there's Meyer where I --

10 MR. GILLEN: Object to form.

11 BY MR. ROTHSCCHILD, CONTINUING:

12 Q Let me just finish. I mean, in other words, if you took Behe
13 away and you took Dembski away and they'd never written, and
14 nobody had replaced them, would you have any basis then to
15 say Intelligent Design has developed in a way that
16 constitutes science?

17 MR. GILLEN: Object to form.

18 THE WITNESS: Well, let's see. First of all, we haven't
19 talked about Meyer's work which I'm not intimately familiar
20 with. But of course there is that sort of strand there as
21 well. But I take it you're after -- your -- the thrust of
22 your question is that, you know, if you took away these three
23 guys or four guys, or how many, you know, finite number of
24 guys, would there be any Intelligent Design? I actually
25 think -- see, we've so far been discussing this issue of

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1 kind of, you know, proto-scientific development. Like
2 Paley's argument and so forth, and then tries to put it in a
3 more scientifically rigorous form like Dembski's done with
4 the explanatory filter. And so you do see a development.
5 And you also -- and in the way in which the critics treat it.
6 So when the philosophers are debating with Dembski, they
7 explicitly say, let's put aside his religious assumptions and
8 just deal with his arguments on their face. And the kinds of
9 arguments they give, first of all, it's published in their
10 main peer reviewed journals, in the Glossary of Science in
11 the United States. And he responds there. And it's an
12 argument that, you know, they could be having with anyone,
13 right, who they would normally respect as being scientific
14 and so forth. And Michael Ruse, when he writes, I mean, he's
15 an interesting guy to have watched over the last 20 years
16 since he's writing a book a year on this kind of stuff.

17 And, you know, the -- you know, the Darwin End Design, a
18 book that came out in 2003, there he quite explicitly, when
19 he discusses Intelligent Design, he makes the connections
20 with the natural theology tradition, he treats it in a very
21 kind of respectful manner, and in fact he says that, you
22 know, these views that these guys are putting forward these
23 days could be easily confused with kind of respectable
24 scientific views. And that's something you wouldn't -- they
25 wouldn't have said 20 years ago about creation science. You

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1 Intelligent Design as something that is mutually exclusive
2 from evolutionary theory. And I understand that because of
3 the nature of the case we're talking about. But within
4 evolutionary theory, within evolutionary theorists, there
5 has -- there have been tendencies in that direction as well.
6 So it's not like Intelligent Design is something completely
7 alien to people who we would normally consider to be
8 contributors to evolutionary theory. I mean, you actually
9 have people, I cite Theodosius Dobzhansky, for example, who's
10 one of the founders of the Neo-Darwinian synthesis who's a
11 geneticist, who quite obviously took Intelligent Design
12 seriously and didn't think of it as being exclusive of
13 evolution. Right. So -- so -- so the thing is that what
14 would be -- yeah. I mean, there is a sense in which the
15 Intelligent Design movement as it's understood today, you
16 know, as this is kind of American phenomena defined by these
17 guys who made the assumptions in association with the
18 Discovery Institute, I mean, there's a sociological way of
19 defining them. Yeah, maybe that form wouldn't exist. But
20 the general ideas and stuff, I mean, are still lurking there
21 in evolutionary theory. And there is stuff that these people
22 have already developed that could be taken, you see. I mean,
23 so -- I'm sorry. I don't know if that answers your question.
24 But I was trying to sort of --
25 BY MR. ROTHSCCHILD, CONTINUING:

1 right? And that's not surprising because Behe is trying to
2 kind of come up with an alternative science. And peer review
3 processes are designed for promoting normal sciences that are
4 already on the ground. So not surprisingly they're going to
5 say, look, we can -- we can explain what you're talking
6 about, we don't need your competing explanation. That
7 doesn't mean his explanation is false. It just means that
8 from the standpoint of the way in which normal science is
9 conducted, it's not very useful.

10 But if he wants to come up with an alternative
11 science -- which is presumably what he wants to do in a
12 sense -- then he -- you know, he's got to launch his own
13 research program. I mean, and that's where it becomes
14 important to have a clear sense of what these guys' research
15 program is, where are they going with this. Because
16 otherwise, then you would just say, oh, it's just parasitic
17 on what evolutionists are doing, which is a critique you
18 often get in Intelligent Design. But if you can show that
19 these people have a positive research program, they're
20 pursuing their own research, going in their own direction,
21 the fact that it can't get published in peer review journals
22 in molecular biology as it's traditionally understood is not
23 itself a problem.

24 Q Okay. But right now as you understand it, there is neither a
25 robust record of peer reviewed publications, nor a robust

1 A Well, I mean, it depends how fast you think things ought to
2 take. I mean, you know, the time it took to go from Darwin's
3 Origin of the Species, to the Neo-Darwinian synthesis, right,
4 was from 1860 to let's say 1930, 1940, with a quarter of a
5 century in the middle where people thought Darwinism was dead
6 when genetics first came up. Okay. That's the history of
7 Darwinism for the first half of its life. Okay. I mean, you
8 know, if that's the benchmark, then you see, then I think we
9 ought to be a bit lenient about Intelligent Design.

10 Q And what -- I raise the point, Steve, not because it -- I'm
11 trying to assert something about what Intelligent Design
12 might become long after, you know, we've, you know, gone to
13 dust. What I'm -- what I'm raising the question is given its
14 primitive condition, why would you -- why would it be taught
15 to ninth graders?

16 MR. GILLEN: Object to form.

17 THE WITNESS: Well, precisely for this reason. Namely,
18 we're talking about how to take science forward in the
19 future. And it seems to me that we sort of betray kind of
20 the open-mindedness that we take to be -- you know, we take
21 science to exemplify as a hallmark of our civilization if we
22 don't -- you know, if we don't present students with the
23 possibility that science is something that's still very open
24 for very fundamental forms of inquiry. And the best way to
25 do that is to show how one might study something like life

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1 research program?

2 MR. GILLEN: Object to form.

3 BY MR. ROTHSCILD, CONTINUING:

4 Q Is that fair?

5 A I think the research program is in its early stages. Okay.

6 I mean, that's a little different than robust.

7 Q Okay.

8 A And I think, yes, the peer review record is not robust. I
9 think nobody would deny that. I don't think they deny it
10 either.

11 Q And in the case of a research program, I mean, you can't
12 identify any empirical research that's being done using
13 irreducible complexity or using the explanatory filter,
14 correct?

15 A Well, I mean, the theories are being developed, right? I
16 mean, Dembski has been making his refinements and I think
17 Behe has been doing research, but I'm just not -- I don't
18 have firsthand familiarity with it.

19 Q And here's what -- you know, Steve, what I'm troubled with is
20 that I think it's the case that -- I think you would agree
21 with me that you would characterize Intelligent Design as in
22 its relative infancy; that there's some people doing some
23 thinking about it, thinking hard about it, they've come up
24 with some ideas, and that it really hasn't moved much beyond
25 that. It might, but right now it hasn't; is that fair?

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1 starting with fundamentally different assumptions from the
2 taken for granted view, because otherwise we're stuck with
3 just teaching dogma science. It's sort of defeating the
4 whole kind of open -- openness of science, what makes it such
5 an exciting and important field. I would have thought from a
6 pedological standpoint you would want to expose people to
7 kind of new views that haven't been fully explored yet
8 because it gives something for them to do that's kind of
9 exciting, rather than just filling in the puzzle of something
10 that's already been established for several generations.

11 BY MR. ROTHSCILD, CONTINUING:

12 Q Now, you've read the statement that they're going to read to
13 the Dover students, right?

14 A Uh-huh. Yes.

15 Q Okay. And --

16 A Well, look at the fourth paragraph, right?

17 Q Right. Okay. I want you to look at the text right below the
18 statement.

19 A Okay.

20 Q And it says, the Superintendent, Dr. Richard Nilsen, has
21 directed that no teacher will teach Intelligent Design,
22 creationism, or present his or her or the board's religious
23 beliefs, right?

24 A Uh-huh. Yes.

25 Q How is the objective you just discussed accomplished if

1 students are simply being told here's Intelligent Design, but
 2 then they're not allowed to discuss it?

3 A I didn't -- well, I'm endorsing this view. I'm not
 4 responsible for this view. I don't -- at least as far as I
 5 understand, I don't endorse this.

6 Q Okay. You -- so you -- the Dover policy of simply making
 7 students -- of telling students about Intelligent Design but
 8 then not allowing them -- allowing the teacher to talk about
 9 it doesn't accomplish the objective?

10 A It defeats the purpose, yes. That's true. Yes.

11 MR. ROTHCHILD: Okay. I'd like to mark as Fuller
 12 Exhibit 4 -- let's see if I have a stapled version.
 13 (Marked for identification Fuller Deposition Exhibit
 14 No. 4)

15 BY MR. ROTHCHILD, CONTINUING:

16 Q Do you recognize the document I've marked as Exhibit 4?

17 A Yes, I do.

18 Q And what is that?

19 A It is a report I wrote following a global cyberconference I
 20 did on public understanding of science, I believe it was
 21 1998. Yes.

22 Q Okay. And is this project you're describing in this article
 23 sort of representative of the work you do in social
 24 epistemology?

25 A It's a kind of applied side of it you might say, yes, because

1 of that kind. We call in scientists actually to sort this
 2 stuff out for us. People are not -- the people who are
 3 governed by these scientifically derived rules are not
 4 normally consulted or involved in the process. And this kind
 5 of issue starts to become more and more important as people
 6 perceive that there are more and more scientifically
 7 generated threats and hazards in the society. And in a
 8 sense, they want to get involved participating in decision
 9 making concerning science and so forth. And so in that
 10 sense, they want to behave more like citizens of a nation
 11 rather than, you know, being under a monarch, where science
 12 is the monarch in this case.

13 Q Okay. And, you know, you use the phrase science is the
 14 monarch. Who's science?

15 A Well, I'm talking about like the National Academy of
 16 Science. Right. So we're not talking about all rank and
 17 file scientists, because in fact depending on where you are
 18 institutionally in science, you hold different types of
 19 viewpoints, okay, about how science should be used and so
 20 forth. But I'm talking about the sort of the people, the
 21 main disciplinary people. Right. The people who run the
 22 professional societies, who run the National Academy of
 23 Sciences, which tend to keep a kind of monolithic view of
 24 what science is about.

25 Q Are there risky alternatives, and I'll raise one example.

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1 it tries to bring different people together and so forth.

2 Q Okay. And if you go to the second page of the document which
 3 is page 330 of the article, there's a section entitled
 4 intellectual motivation for the cyberconference; do you see
 5 that?

6 A Yes.

7 Q Okay. And I take it the point of this conference is to
 8 discuss public understanding of science?

9 A Yes.

10 Q Okay. And towards the bottom of the first paragraph of that
 11 section, this concept with the acronym PUS?

12 A Yes.

13 Q Is --

14 A That's public understanding of science.

15 Q Yes. Stated can be understood as symptomatic of a crisis in
 16 scientific representation, akin to subjects of a monarch who
 17 wish to be regarded as citizens of a nation, but have yet to
 18 identify an effective political vehicle for its realization.
 19 Can you explain what you're trying to convey there?

20 A Okay. Well, the idea being that in the modern period at
 21 least, science has had a kind of uni -- sort of unilateral,
 22 maybe monolithic authority over, well, political opinion
 23 and -- and in all kinds of other respects, and in a sense, is
 24 supposed to stand for all of society in terms of, you know,
 25 for example, providing food, health, safety standards, things

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1 You know, we talked about global warming. And, you know, for
 2 example, we see in the present American presidential
 3 administration that scientists come to gather data and come
 4 to conclusions about the state of global warming, and then
 5 we're led to understand by some quarters that political
 6 considerations, you know, effectively suppress that
 7 scientific information. I mean, is that -- isn't that the
 8 risk of the alternative you're suggesting?

9 A I mean, I think what you're saying is true. But that doesn't
 10 mean that therefore there's global warming, okay? I mean, I
 11 think what we do lack is a sort of -- a general and full,
 12 open discussion. So you're right, I'm not going to deny that
 13 there has been the suppression of scientific information. But
 14 just making the scientific information known doesn't
 15 necessarily resolve the issue. So there's a sense in which
 16 one needs to think about what is the appropriate forum in
 17 which these different opinions concerning global warming
 18 should be articulated and discussed, and then decisions
 19 taken. I think that's kind of more the issue. It's not like
 20 we kind of already know the answer but it's being suppressed
 21 by politicians.

22 Q And then if you go to the next page, page 331, you have a
 23 discussion of American's discussion of PUS --

24 A Uh-huh.

25 Q -- having been more open to matters, being more open

1 including to the incorporation of religiously inspired
2 doctrines, for example, Intelligent Design theory, a/k/a
3 creationism into mainstream science education. Do you see
4 that?
5 A Uh-huh, uh-huh.
6 Q And that's consistent with what you told me today, which is
7 that Intelligent Design theory is a form of creationism?
8 MR. GILLEN: Object to form.
9 THE WITNESS: But it's -- no. But it's not all of
10 creationism, and it's in fact the part of creationism that
11 gets taken into science. So, I mean, I mean, obviously, I'm
12 just -- because in the time that this piece was written,
13 right, so this was written in 1998, Intelligent Design theory
14 wasn't that widely used as an expression. So I put the
15 creationism in there so people kind of have a sense of what
16 exactly Intelligent Design is without me having to give a
17 whole song and dance about it, because I'm just using it as
18 an example. But I didn't mean to say that everything about
19 Intelligent Design corresponds to everything about
20 creationism.
21 BY MR. ROTHSCCHILD, CONTINUING:
22 Q But you -- what do you understand the acronym a/k/a to mean?
23 A Yeah, also known as.
24 Q Okay. So --
25 A Right. But in 1998, okay, we're talking -- you know, when

1 is now. Had I written this thing today, I would not put it
2 this way. I mean, these things are time sensitive. In that
3 respect, Intelligent Design has made progress fairly rapidly
4 because in the course of whatever this is, seven years since
5 this piece has been published, right, the status of this
6 thing has changed somewhat.
7 BY MR. ROTHSCCHILD, CONTINUING:
8 Q And in what respect?
9 A Well, in the sense that I think it's more easily
10 disentangleable. So like even when you were talking about
11 Intelligent Design theory, you were able to nail it down to a
12 few people, right, who are in a way separable from the
13 general creation movement. And I think that -- you know.
14 And I think that that's because of all the, you know, not
15 just the publication of the books, but also the way in which
16 the discussion of Intelligent Design has kind of moved off in
17 its own space. So in a sense, you can talk all about
18 Intelligent Design now without bringing in all the other
19 schools of creationism, or the six -- you know, the six day
20 stuff or any of that.
21 Q But that was not true in 1998?
22 MR. GILLEN: Object to form.
23 THE WITNESS: I think in 1998 these things were much
24 more confused.
25 BY MR. ROTHSCCHILD, CONTINUING:

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1 did Dembski's book come out? 1998? I mean -- right? I
2 mean, we're talking pretty early before this thing becomes
3 really crystalized as something that's separable from all
4 these different branches of creationism.
5 Q So you're saying in 1998, Intelligent Design was more similar
6 to creationism than it is today?
7 MR. GILLEN: Objection to form.
8 THE WITNESS: I'm not actually -- I'm not actually
9 making any commitment to that in this parenthesis. I'm just
10 using it as a marker so that people can understand what
11 Intelligent Design -- since Intelligent Design theory was an
12 ascendant notion, what exactly -- how -- you know, in what
13 conceptual space one should put that when thinking about what
14 religiously inspired doctrines mean.
15 BY MR. ROTHSCCHILD, CONTINUING:
16 Q Okay. And Intelligent Design -- you were characterizing
17 Intelligent Design theory as a religiously inspired doctrine?
18 A Well, it is, and to a certain extent is religiously inspired.
19 But to be religiously inspired is not to be religion.
20 Q Okay. And -- and you were equating it with creationism?
21 MR. GILLEN: Object to form.
22 THE WITNESS: I wasn't equating it. I wasn't equating
23 it. All right. I mean, I was just -- I was using it as a
24 kind of -- as a placeholder for it in a period where this
25 term Intelligent Design wasn't yet consolidated in the way it

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1 Q Okay. Confused by who?
2 A Well, I just mean just generally speaking.
3 Q You for one?
4 A Look, I didn't say I was a creationist or Intelligent Design
5 theorist. But I do think that -- I do -- I do find -- I have
6 found out more about it in the interim, I think it's fair to
7 say that I knew less about it back then. Largely because
8 there was less of it to know, okay. And I know more about it
9 now. But again, this is seven years ago.
10 Q Okay. Now, when I asked you about this before, you said
11 you'd been following this issue?
12 A Not -- I mean, but I never said I was an expert on this. I
13 said I was following it, you know, kind of shadowing it.
14 That doesn't mean I'm an expert on it.
15 Q I mean, you know, these -- Steve, words are pretty hard to
16 escape. Religiously inspired doctrine a/k/a creationism.
17 And I think -- what I'm trying to understand is, you know,
18 what about Intelligent Design caused you to characterize
19 it -- characterize it as --
20 A Well, because --
21 Q -- Creationism at the time?
22 A Because all of the response -- look. All of the responses to
23 Behe and Dembski and the line of argument that that led --
24 led from to the present day happened after this. I mean,
25 there is a sense in which, you know, if you want to -- if you

2 Intelligent Design is making this transition from metaphysics
3 to science, the fact that, you know, I would never write a
4 statement like that today because things have changed in the
5 seven years. Okay. And I didn't say -- you know. I mean,
6 and maybe I did an injustice to Intelligent Design theory
7 back in 1998 because I hadn't -- you know, I hadn't read
8 Behe's book which was already out. I mean, that's entirely
9 possible. That may well be true.

10 Q Going to the -- to the back of the document, the second to
11 the last page -- third to the last page, sorry, 339.

12 A Uh-huh.

13 Q You have an appendix that lists titles of opening statements.
14 And one of them is telling the difference between science and
15 religion. Do you have a recollection of what that was about?

16 A Okay. One thing to point out is that these statements,
17 because I've done two global cyberconferences. In the first
18 one, I did not write -- I mean, write the opening statements.
19 I did that in the second one. So I'm not sure who wrote this
20 first opening statement. It may have been John Angus
21 Campbell, it may have been him. I mean, that is one
22 possibility.

23 Q Okay. Speaking of John Angus Campbell, you had an essay or
24 article that was published in the book he and Stephen Meyer
25 edited called Darwinism, Design and Public Education?

2 back then.

3 Q So I take it you had some familiarity with Intelligent Design
4 at the time you wrote the article?

5 A I guess so, yes.

6 Q And if you flip to page 536, the second full paragraph you
7 talk about the idea that creationism has inherited Lamarck's
8 charge may seem strange until we consider particular articles
9 in this volume, and you refer to Stephen Meyer and Michael
10 Behe's article. So, I mean, I guess the first thing to
11 clarify is, I'm a little confused about sort of the timing
12 here.

13 A Were they in the original journal article, you're asking?

14 Q Yes.

15 A I think they were because I don't -- I don't actually recall
16 substantially revising this.

17 Q Okay. So you were, in this article written in 1998,
18 referring to articles by Dr. Meyer and Professor Behe about
19 Intelligent Design that you believe were also written in 1998
20 or sooner?

21 A That's right, yes, because there was a special issue of that
22 journal that was basically the launch pad for the volume.

23 Q Okay. And you say the idea that creation has inherited
24 Lamarck's charge may seem strange until we consider
25 particular articles in this volume, and then you refer to

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1 A Yes.

2 Q Okay. And that book was -- I think it published in 2003?

3 A Yes.

4 Q And your article which I'm going to mark as an exhibit was
5 titled, An Intelligent Person's Guide to Intelligent Design
6 Theory?

7 A Yes.

8 Q Did you come up with that title?

9 A Yes, yes, yes.

10 MR. ROTHSCHILD: Let's mark that as the next exhibit.
11 (Marked for identification Fuller Deposition Exhibit
12 No. 5)

13 BY MR. ROTHSCHILD, CONTINUING:

14 Q Was this article published in any other forum before it
15 was --

16 A Yes.

17 Q -- part of the book?

18 A Yes. In fact, it was originally published in Rhetoric and
19 Public Affairs, which is a peer reviewed journal in, I guess,
20 Texas A and M.

21 Q And do you remember when it was published?

22 A My vitae would have that, if you'll just give me a moment.

23 Q Sure.

24 A Here it is. 1998.

25 Q Okay.

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1 those two articles. And I'm interpreting that to be labeling
2 Meyer and Behe's articles as examples of creationism, is that
3 fair?

4 A Yes.

5 Q Okay. So again, at this time, in your view, you consider
6 Intelligent Design as creationism?

7 MR. GILLEN: Object to form.

8 THE WITNESS: I mean, again, it seems to me that I'm
9 using it in this very general kind of way that's not
10 presupposing that all of them hold the same views.

11 BY MR. ROTHSCHILD, CONTINUING:

12 Q I'm not suggesting it is. In what sense -- I mean, I
13 understand that you certainly are not suggesting that, for
14 example, this work or Intelligent Design work is, as a
15 general matter, creationist in the sense that it requires
16 belief in a six day creation?

17 A That's right, or biblical literalism or anything of that
18 kind.

19 Q Okay.

20 A No. So it's not that kind of creationism.

21 Q But clearly, you are indicating that Intelligent Design is
22 creationism in some sense?

23 MR. GILLEN: Object to form.

24 THE WITNESS: It is a -- it does have roots in that. I
25 mean, Intelligent Design is a way of interpreting

1 creationism, that's true.
 2 BY MR. ROTHSCHILD, CONTINUING:
 3 Q Okay. And what aspects of -- what do you mean by creationism
 4 when you say Intelligent Design does have roots in
 5 creationism or is creationist?
 6 MR. GILLEN: Object to form.
 7 THE WITNESS: Well, I mean, the motivation. The
 8 motivation for putting forward Intelligent Design is from
 9 people who do think that there is a divine creator. I mean,
 10 I think historically, that's been the case. And I think it's
 11 probably true of these people. But again, what makes it
 12 science isn't that fact. I mean, again, all kinds of
 13 religious motivations inform science. I mean, so there's
 14 nothing, in a sense by calling it creationism what I'm doing
 15 is I'm giving something about the motivation of the people
 16 but not necessarily about the scientific status of what
 17 they're doing. Those are two separate issues. You've got
 18 context of discovery, context of justification.
 19 BY MR. ROTHSCHILD, CONTINUING:
 20 Q Okay. And so when you -- when you refer to this Intelligent
 21 Design work as creationist, do you -- do you mean it only in
 22 the sense that it's motivated by creationist interest?
 23 A Yes.
 24 Q Okay. And not anything about the content of Intelligent
 25 Design?

1 A No, because in fact these people in practice don't actually
 2 say much about the qualities of the creator, right. I mean,
 3 in that sense, they don't do a lot of the stuff of
 4 traditional creationism.
 5 Q They do suggest that the designer is a supernatural creator,
 6 correct?
 7 MR. GILLEN: Object to form.
 8 THE WITNESS: Well, I mean, yes. But that's not saying
 9 a lot, you see. I mean, I just don't think that's saying
 10 very much. I think --
 11 BY MR. ROTHSCHILD, CONTINUING:
 12 Q Do you -- go ahead.
 13 A No, no, no, you go ahead.
 14 Q Do you consider that an aspect of creationism; that a -- that
 15 there is a -- that the explanations of life include a
 16 supernatural creator?
 17 MR. GILLEN: Object to form.
 18 THE WITNESS: Yes. I think creationism does presuppose
 19 that the creator is separate from the creation, in which case
 20 it is supernatural. Yes. I mean, so yes. I mean, it's
 21 attached to a certain kind of cosmology which does involve a
 22 difference between the creator and the created. So it's
 23 true, supernatural in that sense. But again, I don't see
 24 this as operating in a way that actually, in some way
 25 viciates the science that's being done.

1 BY MR. ROTHSCHILD, CONTINUING:
 2 Q Could you turn to page 538 of the article. In the first full
 3 paragraph, you say, my tentative approval notwithstanding,
 4 Meyer's view raises its own questions, one theological -- one
 5 theological and the other more strictly scientific. You say,
 6 is it reasonable or even nonblasphemous to suppose that God
 7 is the ultimate artificer? Artificer? And you go on to talk
 8 about Meyer's willingness to subvert the significance of the
 9 boundary between biological and mechanical forms of
 10 intelligence being intellectually bracing. And then it goes
 11 on. Can you explain what you're getting at here?
 12 A Well, I mean, in a sense what I'm bringing up is a kind of
 13 concern that actually you were bringing up earlier. I see
 14 you get your ideas from good places. Namely, this business
 15 of just because we can -- even if we can understand how human
 16 beings create things, why should we think this is any kind of
 17 model for understanding how God does things? And let alone
 18 how life is created. So, yes, that's the -- that is the
 19 objection I'm raising here.
 20 Q And I think -- I think you understand -- I understand that at
 21 one level you're raising that, that that's a theological
 22 problem?
 23 A Yes.
 24 Q That we -- it's blasphemous to suggest that, you know, what
 25 we know about ourselves and what we can do is in any way a

1 model for God; is that right?
 2 A Yes, yes.
 3 Q Okay. Is that -- do you also -- are you also suggesting that
 4 that argument is scientifically problematic?
 5 A Well, I don't seem to say that here, do I? No, no. The
 6 scientific side is a different argument, isn't it, right?
 7 Because there's two arguments here, right? There's a
 8 theological argument which is what we're talking about, but
 9 then there is also a scientific issue.
 10 Q Right, which is separate?
 11 A Yeah.
 12 Q Do you find the first argument which you focus on
 13 theologically --
 14 A Yeah.
 15 Q -- also to be scientifically problematic? Because I can't
 16 get over it.
 17 A I -- see, my attitude toward this has changed a bit over the
 18 last seven years, okay? I mean, I guess I would have said
 19 yes back then, that it was problematic. But now I think that
 20 there's a sense in which, as so much -- I've mentioned this
 21 earlier. So much of science goes on to be done as computer
 22 simulations, where the scientists in a sense has to be
 23 something an artificer, and that includes when one is trying
 24 to model the nature of life and the way in which life
 25 develops and so forth, I think it actually becomes easier to

1 Q Continuing your article, page 539, you have your conclusion,
 2 creationism's rhetorical virtuosity. And you say, I have no
 3 doubt that virtually any position in the philosophy of
 4 science can be used as a rhetorical resource to challenge the
 5 scientific establishment. What do you mean by that?
 6 A Well, I mean, in the sense that philosophical positions,
 7 especially once they become recognizably philosophical, tend
 8 to be developed kind of independently of this -- you know,
 9 the science that they were originally associated with. So in
 10 a sense, they can be used as sort of rhetorical markers,
 11 right? So people holding opposite views can actually appeal
 12 to the same kinds of philosophical views. I mean, this
 13 happens with the demarcation criterion with all kinds of
 14 views.
 15 Q And then you go onto say Meyer, for example, appeals to an
 16 especially strong form of scientific realism, inference to
 17 the best explanation, to combat the evolutionists.
 18 A Yes.
 19 Q What do you mean by that?
 20 A Okay. There is this -- there is this force -- okay. So
 21 scientific realism basically says science is trying to come
 22 up with a picture of ultimate reality. Kind of in its
 23 most -- in its maximally coherent comprehensive sense. And
 24 you might say the paradigm case of this is Newtonian
 25 mechanics, which try to -- you know, explain all the physical

1 my theory is the only way that can explain it. You guys can
 2 only explain part of it.
 3 Q And let's -- let's talk about that in the sense of the
 4 irreducible complexity. And I think -- I think what you said
 5 is, if I understood you correctly, is sort of it's the best
 6 that -- or tell me if you agree with this, that what Behe's
 7 saying is I can -- by using the proposition of irreducible
 8 complexity, I'm demonstrating that Intelligent Design is
 9 better explanation than those other explanations that are out
 10 there?
 11 A Yes.
 12 Q Okay. And obviously, the most sort of prominent of those
 13 explanations in terms of biological life would be random
 14 mutations and natural selection --
 15 A Yes.
 16 Q -- correct?
 17 A Yes.
 18 Q And he's saying that's not an adequate explanation for what
 19 I'm saying?
 20 A Yes.
 21 Q Therefore, Intelligent Design is the best explanation?
 22 A Yes, that's roughly what's going on.
 23 Q Okay. And obviously, we know there's been a number of
 24 challenges to sort of the first part of that, that a lot of
 25 critics have said, no, irreducible complexity really doesn't

1 phenomena by the smallest set of laws. So, you know, and
 2 and -- and you want -- and so what you want to say, that no
 3 other explanation could have done it as well as Newton's
 4 could have. And so typically, this -- this involves trying
 5 to have lots of different things explained by kind of
 6 covering principle. And, well, this is kind of what Meyer is
 7 doing, right? Meyer is trying to do this kind of thing.
 8 Q What do you mean by inference to the best explanation?
 9 A Oh, well, the point is that no other explanation could
 10 provide as good an explanation. That there's a kind of, as
 11 it were, the kinds of things that you're trying to explain
 12 together, I mean, it's a bit like irreducible -- irreducible
 13 complexity is a great example of inference to the best
 14 explanation. Namely, if you say that a cell is this thing
 15 that hangs together in this very unique kind of fashion,
 16 right, then there can -- you know, there is only one
 17 explanation that actually can explain the uniqueness of that
 18 situation. Right. And the very idea of irreducible
 19 complexity trades on that. And so inference to the best
 20 explanation is the idea that for any given thing, right,
 21 there is always this one ultimate best explanation, right,
 22 that you can find from eliminating all the competitors.
 23 And -- and -- and the thing about it is, right, inference to
 24 the best explanation works if there is a very agreed upon
 25 sense of what needs to be explained. And then you say, well,

1 demonstrate that natural selection didn't operate, right?
 2 A Yes.
 3 Q But then what I want to focus on is the second half of that
 4 proposition. Therefore, Intelligent Design is the best
 5 explanation?
 6 A Yes, you're right, it doesn't follow. That's true.
 7 Q It doesn't follow?
 8 A That's true. It doesn't make it wrong. It just doesn't
 9 follow.
 10 Q I mean, that's my question. There's no there there, is
 11 there?
 12 MR. GILLEN: There there, is there? I object to the
 13 form.
 14 THE WITNESS: No. You have to assume that you've
 15 eliminated all the rival hypotheses. Not just one. That's
 16 correct.
 17 BY MR. ROTHSCHILD, CONTINUING:
 18 Q And -- and -- and even if -- I think I would agree with that
 19 proposition. But then I'm still troubled by how you
 20 wouldn't -- on what basis are you making an affirmative case
 21 for design by an intelligent designer, or creation by
 22 intelligent designer?
 23 A I'm doing it on a different basis, right? Namely, I'm trying
 24 to expand the possible explanations. I'm not arguing it the
 25 way Behe's arguing it.

1 Q No, no, I understand. But what I'm saying, you -- you -- you
 2 made a point which I think I agree with, which is, you know
 3 Behe's, you know, effectively elim -- saying he's eliminated
 4 one possibility, but there might be other hypotheses, right?
 5 A Yes. Demb -- Dembski has a similar problem, actually.
 6 Q Okay. Okay. So both of them have this problem, right?
 7 A Uh-huh.
 8 Q Yes?
 9 A Yes, yes.
 10 Q Okay. But then I -- even granted your point, which I do, I'm
 11 still troubled by the idea that even if you could eliminate
 12 all the, for example, natural hypotheses that have been
 13 asserted, one could make a positive case for action by an
 14 intelligent designer. And I'm trying to understand how that
 15 follows, which I -- I -- I think is the conclusory
 16 proposition?
 17 A Yes. I mean, yes. It doesn't follow. You're absolutely
 18 right. But typically what happens in these kinds of
 19 arguments, right, is that the Intelligent Design person, as
 20 the person who's always facing evolutionary challenge, has to
 21 make the Intelligent Design argument more specified, right?
 22 So what happens then is that the Intelligent Design argument
 23 becomes more precise. So I think what -- I don't see it as
 24 an inherent problem. It just means that there's -- there's
 25 never going to be a decisive moment where the Intelligent

by denying what -- I mean, if you got -- if you got random
 mutation and natural selection as one hypotheses, right, then
 the other -- you know, the other hypothesis could be one
 where there is some kind of plan. And since the cell had --
 you know, the cell is designed the way it is so that it could
 survive many different kinds of changes in the natural
 selection environment. That's not -- that's not an
 incomprehensible notion, right? I mean, it's just to make
 that specific so you could actually test whether it's, you
 know, it's -- it's true in a certain situation, I think
 that's the problem. It's not really specified enough. But,
 you know, I mean -- let me make a follow up point to this.
 Evolutionists and Intelligent Design people can go about
 criticizing each other and that's perfectly fine and that's
 very appropriate in science. But there is also -- you know,
 but as it were, the -- the -- the relative scientific status
 of the theories aren't just determined by those clashes and
 what happens in those clashes. But it's also determined by,
 as it were, how they take it home to develop their own
 theories independently. So if we take seriously the idea
 that Intelligent Design theory is in a way trying to scope
 out the phenomena of reality somewhat differently than the
 evolutionists are, so it includes cosmological issues and
 maybe supernatural issues, even, in a way in which evolution
 rules out of court, right, then what you're also looking at

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1 Design argument wins by default by seeing off evolutionary
 2 challenges. That's all it means.
 3 Q But I --
 4 A It doesn't mean it ever -- at no point does it ever get shown
 5 to be wrong. It -- what -- it shows it hasn't eliminated
 6 alternatives.
 7 Q And never would?
 8 A That's entirely --
 9 MR. GILLEN: Object to form.
 10 THE WITNESS: I mean, that's entirely possible. And
 11 that's why some people object to the idea of inference to the
 12 best explanation as being a method in science, wherein a
 13 sense, right, the question is always open as long as there
 14 are alternative hypotheses available. People who believe in
 15 the inference to the best explanation do believe that all the
 16 opponents are eventually seen off.
 17 BY MR. ROTHCHILD, CONTINUING:
 18 Q All right. And -- and -- and -- what -- and I -- but I --
 19 and I'm still trying to get to the point, we're talking about
 20 inference to the best explanation. But I don't see how
 21 Intelligent Design is unexplanation at -- what the -- what
 22 the affirmative case is for Intelligent Design even being one
 23 of the alternatives?
 24 A Well, I'm not sure. I mean, it seems to me that the
 25 possibility of space for Intelligent Design is opened up just

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is not how -- not only how these two theories relate to each
 other, but also how they develop in light of the criticism in
 their own terms. Do they go to the places they're trying to
 go to with regard to explanation and so forth? And so when
 somebody like Meyer, let's say, wants to have this kind of
 covering information theory as the metatheory of Intelligent
 Design, well, that's nothing -- you know, that's -- you know,
 evolutionists think that's just weird, right? But then he's
 trying to do something different. He's not trying to do what
 the evolutionists are doing. So while they do conflict over
 certain areas like how do you explain the cell's stability,
 the overall goals of the research program are somewhat
 different, and so there are different kinds of concerns that
 they will then want to take forward when they develop their
 theories.
 Q Go to the next page of the article, page 540. You invoke the
 well-known and highly regarded Fuller's Fairness Rule, which
 is if you appeal to metaphysical explanations at all, you
 must permit a plurality of them. And you also -- you go on
 to say virtually any metaphysical hypothesis can be
 maintained in the face of any negative evidence. Explain
 what's going on here.
 A Okay. Well, this is, in a sense, kind of the -- it's in --
 it's in a way trying to find a useful place for metaphysics
 and science. Okay. And the idea here being that when

1 their hand rhetorically. What do you mean by that?

2 A This is -- yeah. I know -- I recall saying this. I just
3 can't quite find where you're looking at.

4 Q It's the second full paragraph.

5 A Second full paragraph, okay.

6 Q Towards the bottom of the page.

7 A Right. I mean, the point here being that -- that if ID is
8 able to provide a scientific explanation for something, that

9 doesn't rule out the evolutionary one. But there's a
10 tendency to sort of see these things, I think on both sides,

11 in mutually exclusive terms. So if we can provide an
12 explanation and you guys -- and you guys can't then, you

13 know, in principle, we're the only ones who can. So, I mean,
14 I do think that there's a tendency on both sides to think

15 that the two are sort of mutually exclusive.

16 Q And you say then epistemological letigimacy of ID doesn't
17 require showing that evolution cannot provide a credible --

18 A Right, right.

19 Q -- alternative framework, just requires showing that ID has
20 an explanatory framework that can be the basis for a body of
21 scientific research?

22 A That's right. I was making that point earlier with regard to
23 the fact that you just can't judge the legitimacy of ID just
24 purely in terms of how it faces up against evolution. You
25 have to see how it is able to develop the stuff in terms of

1 A No, no, it has -- no, it isn't that. I mean, it's to say
2 that the cell has to have certain kind of components in place
3 in order to have the stability it has so that it's able to
4 survive all the various changes in the environment. Now, it
5 seems to me that that project, if it were fully executed,
6 could be done independently of anything going on in
7 evolutionary theory. I mean -- I mean, so in that respect,
8 Intelligent Design could be pursued as an independent
9 program.

10 Q So if -- if Behe simply showed empirical evidence of the cell
11 maintaining stability --

12 A Well, this is what I would say. I mean, I wouldn't do it
13 that way. I would actually go to the computer simulation and
14 try to model the cell, right, and actually try to come up
15 with the parameters whose interactions end up producing a
16 cell, right, a virtual cell, simulation of a cell, right,
17 that is able then to maintain its stability in the face of
18 the kinds of environmental changes that we normally think of
19 cells as being able to survive in. Right. So if you were
20 able to do that, and so he could then say, look, I've been
21 able to program a cell, and you can do it this way, and
22 there's not going to be an alternative evolutionary
23 explanation for that. And as it were, then throw the
24 gauntlet down and say, you come up with something that isn't
25 as designed as this, that in some sense has a kind of random

1 its own framework.

2 Q And what is your understanding of the explanatory framework
3 ID offers other than the assertion that evolution doesn't
4 provide a credible framework?

5 A Well, I mean, this is where the explanatory filter and the
6 irreducibly complexity notions get mobilized as a way of
7 suggesting research avenues. I mean, that's -- that's the
8 basic -- that's what I mean by the explanatory framework,
9 that within which then research can be done.

10 Q But isn't irreducible complexity nothing more than the
11 assertion that the evolutionary framework doesn't work?

12 A No, it isn't more than that, I mean, because the issue then
13 depends -- determines -- it turns on how you actually develop
14 this thesis, right. And presumably, what you want to do with
15 the irreducible complexity is to identify as it were the
16 parameters that -- all of which have to be in place in order
17 to sell -- in order for the sell to have its stability the
18 way it does, and that there's no way of removing any of those
19 parameters without in fact undermining the stability of the
20 cell, and that evolution cannot provide an alternative to
21 that. So it seems that there is a self-contained research
22 program that perhaps has not been fully executed but is
23 suggested by the idea.

24 Q And I'm not sure what that is besides the fact that evolution
25 or natural selection isn't an adequate explanation?

1 element or something, and you still get this kind of
2 stability over time. I don't think he's done that yet, but
3 it seems to me it could be done. I mean, it'd probably be
4 very difficult, but not out of the question. I mean, I'll
5 tell you one advan -- one -- one thing about Intelligent
6 Design that I think is worth pointing out is because you
7 don't actually have departments and schools and disciplines
8 of Intelligent Design, there's not a ready-made way of
9 training people in the kinds of skills that'll be necessary
10 to sort of carry out a lot of the details of this project. I
11 mean, that's a real problem, I think, that they face
12 sociologically at the moment because, you know, if you've
13 only got a few guys kind of putting forward bold hypotheses
14 and trying to do very sort of striking bits of forays, you
15 know, challenging evolutionists, you can only go so far. You
16 really need to train generations of people. In fact, that --
17 you know, that's how any science survives. And it was only
18 starting in the 1930's and '40's that you start to be able to
19 train biologists who have a sufficient range of skills to
20 actually be able to contribute to Neo-Darwinism as this
21 fully-fledged program that we see it today. So, you know, in
22 a way, they do have a sort of sociological disadvantage here.
23 They're basically trying to cover a lot of the waterfront all
24 by themselves, and of course they don't have all the skills
25 to do it. This is why they would need a school of people to

1 Q Uh-huh. You refer, I think at footnote 11 to a book by --
 2 A Oh, yeah.
 3 Q -- Thomas Woodward, Doubts About Darwin.
 4 A Yes.
 5 Q What is that book about?
 6 A Okay. This was a guy's Ph.D. thesis originally. And what it
 7 is, he basically followed various people around who've been
 8 debating the Intelligent Design/Darwin issue publicly. You
 9 know, so when Phillip Johnson and Stephen J. Gould were
 10 debating, I mean, he'd follow all these people across the
 11 country. And he's basically charting sort of the development
 12 and the arguments that are taking place. And one of the
 13 points that he makes is that in fact Intelligent Design
 14 people kind of have evolved, you might say, as they've
 15 interacted with scientists and they've made more
 16 sophisticated arguments and so forth. And so there's been a
 17 kind of learning curve, you might say, that now makes
 18 Intelligent Design a much more sophisticated theory through
 19 the interaction with the scientists. I mean, it's the kind
 20 of thing, you know, the sort of thing that John Angus
 21 Campbell kind of says would happen, he sort of documents
 22 And as a participant observer, which means that he's kind of
 23 there in the meetings, asks some questions, you know, and
 24 then writes about it.
 25 Q Do you have any relationship with Mr. Woodward?

1 A No, I have not.
 2 Q Why not?
 3 A Well, I don't -- I guess I just -- I haven't thought I was in
 4 a particularly persuasive position to convince the natural
 5 scientists about teaching anything other than what they
 6 already do. I mean, so it just didn't seem to fall to me to
 7 do that. I guess that would be the main reason. Also I do
 8 think there is this issue we keep on going back to about
 9 what's the appropriate faculty for discussing these matters.
 10 And that in the case of some of these things, that a
 11 mathematics or statistics department might be better than a
 12 chemistry or biology department for a lot of this stuff. So
 13 I think there's a kind of open question about where exactly
 14 would you want to be placing the study of this thing.
 15 Q Same question applies to the high school level?
 16 A Well, the high school level, the science courses are much
 17 more generic, aren't they? I mean, so -- and also I think
 18 there's a different purpose as well, because at the high
 19 school level, there is a sense in which you're trying to seed
 20 the next generation of scientists potentially. I mean, that
 21 was something that even your guy, Alters, brought out. And
 22 that it becomes important then to think about the different
 23 scientific perspectives in light of that, whereas by the time
 24 you get to university, people are training to be
 25 professionals already in a given science. So they're sort of

1 A Do I have any relationship with him? I did teach this book
 2 in -- at UCLA when it was still in its proof form. I mean, I
 3 know -- you know, and I have been in contact with him
 4 actually because he does derive some kind of methodological
 5 inspiration from some of my writings in the appendix of the
 6 book. But I've never taught the man, I've never met him
 7 personally. By the way, the context I would say where --
 8 where he is drawing some inspiration from me relates to the
 9 questions that you were raising earlier about the tributary
 10 delta stuff, about the idea of broadening out the scientific
 11 base so that larger numbers of people can have access to
 12 stuff. That's the kind of thing that he found initially
 13 attractive, which comes up in this book mine on Thomas Kuhn.
 14 Q I think you said very early in our discussion that
 15 Intelligent Design is not taught as part of the biology
 16 courses at Warwick University?
 17 A That's correct.
 18 Q Okay. And --
 19 A But we do teach, you know, in this philosophy master's degree
 20 thing, we do teach it. And so --
 21 Q Okay. But I'm correct that it's not part of any of the
 22 natural sciences curriculum?
 23 A No, no.
 24 Q Have you ever advocated at the university that Intelligent
 25 Design be taught as part of the natural sciences curriculum?

1 already engaged in a kind of more technical sort of thing.
 2 And that's -- it's harder to institutionalize at that level.
 3 I think it actually would be easier to institutionalize at
 4 the high school level.
 5 Q Wouldn't it make sense at the undergraduate level, to seed
 6 the next generation of scientists, when the students are --
 7 A Well, okay.
 8 Q -- sophisticated?
 9 A My -- I should explain something. In Britain, you come in
 10 already specialized. I mean, you see, in America, it's quite
 11 common for the first year or two of the undergraduate level
 12 to in a sense be searching around for a major. And so, yes,
 13 in that context, I think that's a -- that's actually right.
 14 So I take your point there. But I was thinking about the
 15 British context, right, where you sort of start
 16 specializing -- you get admitted into a university in a
 17 subject. And that's why the degree program is a three year
 18 rather than a four year program.
 19 Q Could you turn to page 11 of your report.
 20 A Yeah.
 21 Q And at the bottom paragraph, you talk -- you talk about most
 22 philosophers having resisted the charms of naturalism.
 23 A Yes.
 24 Q And that's -- I take it you're distinguishing them from
 25 scientists who, to a large extent, have succumbed to the